

#2

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/911,569

DATE: 08/07/2001
TIME: 10:19:27

Input Set : A:\ES.txt
Output Set: N:\CRF3\08072001\I911569.raw

SEQUENCE LISTING

ENTERED

P5

4 (1) GENERAL INFORMATION:
6 (i) APPLICANT: HAWLEY-NELSON, PAMELA
7 LAN, JIANQING
8 SHIH, POJEN
9 JESSE, JOEL A.
10 SCHIFFERLI, KEVIN P.
11 GEBEYEHU, GULILAT
13 (ii) TITLE OF INVENTION: PEPTIDE-ENHANCED TRANSFECTIONS
15 (iii) NUMBER OF SEQUENCES: 120
17 (iv) CORRESPONDENCE ADDRESS:
18 (A) ADDRESSEE: GREENLEE, WINNER & SULLIVAN
19 (B) STREET: 5370 MANHATTAN CIRCLE, SUITE 201
20 (C) CITY: BOULDER
21 (D) STATE: CO
22 (E) COUNTRY: US
23 (F) ZIP: 80303
25 (v) COMPUTER READABLE FORM:
26 (A) MEDIUM TYPE: Floppy disk
27 (B) COMPUTER: IBM PC compatible
28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
29 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
31 (vi) CURRENT APPLICATION DATA:
C--> 32 (A) APPLICATION NUMBER: US/09/911,569
C--> 33 (B) FILING DATE: 23-Jul-2001
39 (C) CLASSIFICATION:
C--> 36 (vii) PRIOR APPLICATION DATA:
37 (A) APPLICATION NUMBER: US 09/039,780
38 (B) FILING DATE: 16-MAR-1998
41 (viii) ATTORNEY/AGENT INFORMATION:
42 (A) NAME: SULLIVAN, SALLY A.
43 (B) REGISTRATION NUMBER: 32,064
44 (C) REFERENCE/DOCKET NUMBER: 32-95D
46 (ix) TELECOMMUNICATION INFORMATION:
48 (A) TELEPHONE: (303)499-8080
49 (B) TELEFAX: (303)499-8089
52 (2) INFORMATION FOR SEQ ID NO: 1:
54 (i) SEQUENCE CHARACTERISTICS:
55 (A) LENGTH: 10 amino acids
56 (B) TYPE: amino acid
57 (C) STRANDEDNESS: not relevant
58 (D) TOPOLOGY: linear
60 (ii) MOLECULE TYPE: peptide
62 (iii) HYPOTHETICAL: NO
64 (iv) ANTI-SENSE: NO
69 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
71 His Ala Ile Arg Gly Asp Thr Phe Ala Thr

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/911,569

DATE: 08/07/2001
 TIME: 10:19:27

Input Set : A:\ES.txt
 Output Set: N:\CRF3\08072001\I911569.raw

```

72      1          5          10
74 (2) INFORMATION FOR SEQ ID NO: 2:
76      (i) SEQUENCE CHARACTERISTICS:
77          (A) LENGTH: 7 amino acids
78          (B) TYPE: amino acid
79          (C) STRANDEDNESS: not relevant ☒
80          (D) TOPOLOGY: linear
82      (ii) MOLECULE TYPE: peptide
84      (iii) HYPOTHETICAL: NO
86      (iv) ANTI-SENSE: NO
91      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
93      Pro Lys Lys Lys Arg Lys Val
94      1          5
96 (2) INFORMATION FOR SEQ ID NO: 3:
98      (i) SEQUENCE CHARACTERISTICS:
99          (A) LENGTH: 8 amino acids
100         (B) TYPE: amino acid
101         (C) STRANDEDNESS: not relevant ☒
102         (D) TOPOLOGY: linear
104      (ii) MOLECULE TYPE: peptide
106      (iii) HYPOTHETICAL: NO
108      (iv) ANTI-SENSE: NO
113      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
115      Pro Lys Lys Lys Lys Arg Lys Val
116      1          5
118 (2) INFORMATION FOR SEQ ID NO: 4:
120      (i) SEQUENCE CHARACTERISTICS:
121          (A) LENGTH: 20 amino acids
122          (B) TYPE: amino acid
123          (C) STRANDEDNESS: not relevant
124          (D) TOPOLOGY: linear
126      (ii) MOLECULE TYPE: peptide
128      (iii) HYPOTHETICAL: NO
130      (iv) ANTI-SENSE: NO
133      (ix) FEATURE:
134          (A) NAME/KEY: Modified-site ☒
135          (B) LOCATION: 2..20
136          (D) OTHER INFORMATION: /product= "OTHER"
137 /note= "ANY OR ALL OF THE AMINO ACIDS 2-20 CAN BE PRESENT OR ☒
138 ABSENT"
141      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
143      Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
144      1          5          10          15
146      Lys Lys Lys Lys
147      20
149 (2) INFORMATION FOR SEQ ID NO: 5:
151      (i) SEQUENCE CHARACTERISTICS:
152          (A) LENGTH: 20 amino acids
153          (B) TYPE: amino acid
  
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/911,569

DATE: 08/07/2001
TIME: 10:19:27

Input Set : A:\ES.txt
Output Set: N:\CRF3\08072001\I911569.raw

```

154      (C) STRANDEDNESS: not relevant
155      (D) TOPOLOGY: linear
157      (ii) MOLECULE TYPE: peptide
160      (ix) FEATURE:
161          (A) NAME/KEY: Modified-site
162          (B) LOCATION: 2..20
163          (D) OTHER INFORMATION: /product= "OTHER"
164 /note= "ANY OR ALL OF THE AMINO ACIDS 2-20 CAN BE PRESENT OR
165 ABSENT"
168      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
170      Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg
171      1          5          10          15
173      Arg Arg Arg Arg
174          20
176 (2) INFORMATION FOR SEQ ID NO: 6:
178      (i) SEQUENCE CHARACTERISTICS:
179          (A) LENGTH: 40 amino acids
180          (B) TYPE: amino acid
181          (C) STRANDEDNESS: not relevant
182          (D) TOPOLOGY: linear
184      (ii) MOLECULE TYPE: peptide
187      (ix) FEATURE:
188          (A) NAME/KEY: Modified-site
189          (B) LOCATION: 3..40
190          (D) OTHER INFORMATION: /product= "OTHER"
191 /note= "ANY Lys-Arg PAIR FROM AMINO ACID 3-40 CAN BE PRESENT OR
192 ABSENT"
195      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
197      Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg
198      1          5          10          15
200      Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg Lys Arg
201      20          25          30
203      Lys Arg Lys Arg Lys Arg Lys Arg
204      35          40
206 (2) INFORMATION FOR SEQ ID NO: 7:
208      (i) SEQUENCE CHARACTERISTICS:
209          (A) LENGTH: 20 amino acids
210          (B) TYPE: amino acid
211          (C) STRANDEDNESS: not relevant
212          (D) TOPOLOGY: linear
214      (ii) MOLECULE TYPE: peptide
217      (ix) FEATURE:
218          (A) NAME/KEY: Modified-site
219          (B) LOCATION: 2..20
220          (D) OTHER INFORMATION: /product= "OTHER"
221 /note= "ANY OR ALL OF THE AMINO ACIDS 2-20 CAN BE PRESENT OR
222 ABSENT"
225      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
227      Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly

```

RAW SEQUENCE LISTING

DATE: 08/07/2001

PATENT APPLICATION: US/09/911,569

TIME: 10:19:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\08072001\I911569.raw

```

228      1          5          10          15
230      Gly Gly Gly Gly
231          20
233 (2) INFORMATION FOR SEQ ID NO: 8:
235      (i) SEQUENCE CHARACTERISTICS:
236          (A) LENGTH: 7 amino acids
237          (B) TYPE: amino acid
238          (C) STRANDEDNESS: not relevant
239          (D) TOPOLOGY: linear
241      (ii) MOLECULE TYPE: peptide
243      (iii) HYPOTHETICAL: NO
245      (iv) ANTI-SENSE: NO
250      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
252      Gly Arg Gly Asp Ser Pro Cys
253      1          5
255 (2) INFORMATION FOR SEQ ID NO: 9:
257      (i) SEQUENCE CHARACTERISTICS:
258          (A) LENGTH: 23 amino acids
259          (B) TYPE: amino acid
260          (C) STRANDEDNESS: not relevant
261          (D) TOPOLOGY: linear
263      (ii) MOLECULE TYPE: peptide
266      (ix) FEATURE:
267          (A) NAME/KEY: Modified-site
268          (B) LOCATION: 1..20
269          (D) OTHER INFORMATION: /product= "OTHER"
270 /note= "ANY OR ALL OF THE AMINO ACIDS 1-20 CAN BE PRESENT OR
271 ABSENT"
274      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
276      Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
277      1          5          10          15
279      Lys Lys Lys Lys Arg Gly Asp
280          20
282 (2) INFORMATION FOR SEQ ID NO: 10:
284      (i) SEQUENCE CHARACTERISTICS:
285          (A) LENGTH: 19 amino acids
286          (B) TYPE: amino acid
287          (C) STRANDEDNESS: not relevant
288          (D) TOPOLOGY: linear
290      (ii) MOLECULE TYPE: peptide
295      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
297      Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
298      1          5          10          15
300      Arg Gly Asp
303 (2) INFORMATION FOR SEQ ID NO: 11:
305      (i) SEQUENCE CHARACTERISTICS:
306          (A) LENGTH: 7 amino acids
307          (B) TYPE: amino acid
308          (C) STRANDEDNESS: not relevant

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/911,569

DATE: 08/07/2001

TIME: 10:19:27

Input Set : A:\ES.txt

Output Set: N:\CRF3\08072001\I911569.raw

```

309      (D) TOPOLOGY: linear
311      (ii) MOLECULE TYPE: peptide
313      (iii) HYPOTHETICAL: NO
315      (iv) ANTI-SENSE: NO
320      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
322      Lys Phe Thr Ile Val Phe Cys
323      1           5
325 (2) INFORMATION FOR SEQ ID NO: 12:
327      (i) SEQUENCE CHARACTERISTICS:
328          (A) LENGTH: 12 amino acids
329          (B) TYPE: amino acid
330          (C) STRANDEDNESS: not relevant
331          (D) TOPOLOGY: linear
333      (ii) MOLECULE TYPE: peptide
335      (iii) HYPOTHETICAL: NO
337      (iv) ANTI-SENSE: NO
342      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
344      Cys Gly Trp Gly Pro Lys Lys Lys Arg Lys Val Gly
345      1           5           10
347 (2) INFORMATION FOR SEQ ID NO: 13:
349      (i) SEQUENCE CHARACTERISTICS:
350          (A) LENGTH: 26 amino acids
351          (B) TYPE: amino acid
352          (C) STRANDEDNESS: not relevant
353          (D) TOPOLOGY: linear
355      (ii) MOLECULE TYPE: peptide
357      (iii) HYPOTHETICAL: NO
359      (iv) ANTI-SENSE: NO
364      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
366      Gly Gly Tyr Gly Pro Lys Lys Lys Arg Lys Val Gly Gly Gly Tyr
367      1           5           10           15
369      Gly Pro Lys Lys Lys Arg Lys Val Gly Gly
370      20           25
372 (2) INFORMATION FOR SEQ ID NO: 14:
374      (i) SEQUENCE CHARACTERISTICS:
375          (A) LENGTH: 6 amino acids
376          (B) TYPE: amino acid
377          (C) STRANDEDNESS: not relevant
378          (D) TOPOLOGY: linear
380      (ii) MOLECULE TYPE: peptide
382      (iii) HYPOTHETICAL: NO
384      (iv) ANTI-SENSE: NO
389      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
391      Arg Gly Asp Ser Pro Cys
392      1           5
394 (2) INFORMATION FOR SEQ ID NO: 15:
396      (i) SEQUENCE CHARACTERISTICS:
397          (A) LENGTH: 4 amino acids
398          (B) TYPE: amino acid

```

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/911,569

DATE: 08/07/2001

TIME: 10:19:28

Input Set : A:\ES.txt

Output Set: N:\CRF3\08072001\I911569.raw

L:32 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:33 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:36 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]
L:553 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:633 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:676 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:679 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:682 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:746 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:749 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:752 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:755 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:761 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:817 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:823 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:829 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:892 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:895 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:898 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:901 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:904 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:907 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:973 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:976 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:979 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:982 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:985 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:1048 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:1051 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:1054 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:1057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:1060 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:1063 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:1143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
L:1146 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
L:1149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
L:1152 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
L:1155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
L:1216 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:1219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:1222 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:1225 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:1228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:1290 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/911,569

DATE: 08/07/2001

TIME: 10:19:28

Input Set : A:\ES.txt

Output Set: N:\CRF3\08072001\I911569.raw

L:1293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34

L:1296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34

L:1299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34

L:1302 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34

L:1364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35

L:5082 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=115